

Listing of the Claims:

1. (Currently Amended) A system for interacting with displays and devices that use such displays comprised of comprising:
 - a. a display[,] configured to interact with a naked hand or finger of a human user;
 - b. a pointing object;
 - c. a camera that has adapted to have in its field of view the naked hand or finger as the naked hand or finger is pointing to a region of the display or making a gesture to point to a region of the display at least one of the following: (i) the pointing object only, or (ii) the display and the pointing object, or (iii) the display and the reflection or effect that the pointing object can produce on the display;
 - d. a method means for detecting the position of the pointing object or its reflection or effect on the display in the image registered naked hand or finger of the human user in an image registered by the camera, and;
 - e. a method means for establishing the mapping between the position of the pointing object or its reflection or effect on the display naked hand or finger of the human user in the image registered by the camera and a the corresponding location region on the display.
2. (Currently Amended) A system as defined by claim 1 which commands further comprising means for commanding the positioning of a pointing icon on the display.
3. (Currently Amended) A system as defined by claim 1 which commands further comprising means for commanding the input of data into the device using the display.
4. (Cancelled.)

5. (Currently Amended) A system according to claim 4 wherein the pointing object is used to point to 1 further comprising means for selecting different regions of the display by way of changing its the position, attitude, or presentation of the naked hand or finger of the human user.

6. (Currently Amended) A system according to claim 1 wherein the pointing object is used to select, highlight, or define further comprising means for selecting, highlighting, or defining a particular point or region on the display.

7. (Currently Amended) A system according to claim 1 wherein the pointing object is used to define naked hand or finger defines a vector on the plane of the display that indicates a direction and magnitude relative to or with respect to an item on the display or a region of the display.

8. (Currently Amended) A system according to claim 2 wherein the pointing icon on the display can be registered by the camera that has in its field of view the naked hand or finger of the human user.

9. (Currently Amended) A system according to claim 8 which also includes a method further comprising means for correcting the offsets between (i) the position of the pointing object; naked hand or finger of the human user or reflection; or effect thereof on the display as observed by the user or by the camera; and (ii) the position of the pointer icon on the display.

10. (Currently Amended) A system as defined by claim 1 which also includes at least one of the following further comprising:

a. a method means for selecting or highlighting a specific item or icon on the display,

b. a method means for activating a specific process, program, or menu item represented on the display, and

c. ~~a method means~~ for writing, scribing, drawing, highlighting, annotating, or otherwise producing marks on the display.

11. (Currently Amended) A method for detecting a position of the pointing object or its reflection or effect on the display ~~a naked hand or finger of a human user in the an~~ image registered by a camera comprising the steps of:

a. defining at least one characteristic of the pointing object or its reflection or effect on the display ~~human hand or finger of the human user that (i) is registered in~~ can be deduced by processing the image captured by the camera and (ii) distinguishes ~~distinguishing the pointing object naked hand or finger from all or at least a majority of other objects registered in the image from the camera,~~

b. retrieving of the image from the camera,

c. analyzing the image from the camera to locate the characteristic or characteristics of the pointing object or its reflection or effect on the display ~~pointing object; naked hand or finger of the human user,~~

d. determining the most likely position of the pointing object or its reflection or effect on the display ~~naked hand or finger of the human user~~ in the image from the camera based on at least one of the following:

(i) the last known position of the pointing object or its reflection or effect on the display ~~naked hand or finger~~ in the image,

(ii) the position or positions at which the at least one distinguishing characteristic of the pointing object, or its reflection or effect on the display ~~naked hand or finger~~ or the set of the picture elements in the image that comprise the rendition of the pointing object, or its reflection or effect on the display ~~naked hand or finger~~.

12. (Currently Amended) A method according to claim 11 wherein at least one characteristic that distinguishes the pointing object ~~naked hand or finger~~ from other objects in the image from ~~registered~~ by the camera is known a priori.

13. (Currently Amended) A method according to claim 11 wherein at least one characteristic that distinguishes the ~~pointing object from other objects naked hand or finger in the~~ the image from the camera ~~are~~ is determined based on analysis of at least one ~~set image of the data same naked hand or finger acquired from the sensor or one image acquired from the camera.~~

14. (Currently Amended) A method according to claim 13 wherein at least one characteristic that distinguishes the ~~pointing object naked human hand or finger~~ from other objects, whose rendition are present in the image from the camera, is obtained by

- a. acquiring at least two images from the camera, one with the pointing object in view of the or the camera and one without, and
- b. comparing the two sets with one another.

15. (Previously Presented) A method according to claim 11 wherein adjustments or modifications are made to the position, viewing angles, sensitivity, and other settings of the camera pursuant the analysis of the image retrieved from the camera.

16. (Currently Amended) A method according to claim 11 wherein at least part of the procedures for the method is carried out using at least in part the computing mechanisms available on one or more of the following: the display, or the camera, ~~or the pointing device;~~ or the device producing the signal shown on the display, or the device producing the pointing icon on the display.

17. (Currently Amended) A method for establishing a mapping between the ~~set of positions that a pointing object can assume in addressing a set of corresponding points or regions on the display a virtual display space for a human user interacting with a device with a display comprising the steps of:~~

- a. defining the boundaries of the positions that the pointing object naked hand or finger can assume in addressing points or regions on the device display and defining, within the said boundaries, a continuous pointing object virtual display surface,
- b. defining the boundaries of the device display and defining within the boundaries of the display, a continuous pointing object virtual display surface,
- c. segmenting the device display surface into at least two regions,
- d. segmenting the pointing object virtual display surface into at least two regions,
- e. warping the geometry of the surface virtual display for the pointing object so that at least one region of the pointing object virtual display surface overlaps with at least one region of the device display surface, and
- f. establishing a one-to-one or many to one correspondence between overlapping the regions of the pointing object virtual display surface and the device display surface, respectively.

18. (Currently Amended) A method according to claim 17 wherein the boundaries of the set of positions that the pointing object naked hand and finger can assume are obtained by positioning a camera in a way such that the camera has in its view the naked hand or finger of the human user, and querying the user to point to position the naked hand or finger at the boundaries.

19 (Currently Amended) A method according to claim 17 wherein the boundaries of the set of positions that the pointing object naked hand or finger can assume are obtained by contours or the periphery of the display surface as the display surface is the camera

- a. positioning a camera in a way such that the camera has in its field of view the human user,
- b. locating the human user in the image from the camera, and

c. deducing the positions the hand or the finger of the user can assume from the position of the human user in the image from the camera.

20. (Currently Amended) A method according to claim 17 wherein the regions of the virtual display surface comprise at least two sets of pixel elements that comprise the image on the device display.

21. (Currently Amended) A method according to claim 17 wherein at least part of the procedures for the method is carried out using at least in part the computing mechanisms available on one or more of the following: the display, or the camera, ~~or the pointing object~~; or the device producing the signal shown on the display, or the device producing the pointing icon on the display.

Cancel claims 22 - 30.

31. (New) A system according to claim 2, further comprising another camera and wherein the pointing icon on the display can be registered by the other camera.